

chapter 60

Drugs Used for Peptic Ulcer and Acid Reflux Disorders

Objectives

AFTER STUDYING THIS CHAPTER, THE STUDENT WILL BE ABLE TO:

1. Describe the main elements of peptic ulcer disease and gastroesophageal reflux disease.
2. Differentiate the types of drugs used to treat peptic ulcers and acid reflux disorders.
3. Discuss the advantages and disadvantages of proton pump inhibitors.
4. Differentiate between prescription and over-the-counter uses of histamine-2 receptor blocking agents.
5. Discuss significant drug–drug interactions with cimetidine.
6. Describe characteristics, uses, and effects of selected antacids.
7. Discuss the rationale for using combination antacid products.
8. Teach clients nonpharmacologic measures to manage peptic ulcers and gastroesophageal reflux disease.

Critical Thinking Scenario

Mrs. Greenspan, a 26-year-old homemaker, has rheumatoid arthritis that has been treated with aspirin, nonsteroidal anti-inflammatory drugs, and prednisone for the last 10 years. During the past week, Mrs. Greenspan has been feeling increasingly weak. She is dizzy when getting up and has had one episode of syncope (fainting). A work-up indicates that she has a peptic ulcer. Omeprazole, a proton pump inhibitor, is ordered.

Reflect on:

- ▶ Mrs. Greenspan's risk factors that contributed to the development of her ulcer.
- ▶ How symptoms of weakness, dizziness, and syncope are associated with a peptic ulcer.
- ▶ How proton pump inhibitors work to heal ulcers.
- ▶ What therapies (drugs and nondrugs) can be used to prevent a recurrence of her ulcer.

OVERVIEW

Drugs to prevent or treat peptic ulcer and acid reflux disorders are comprised of several groups of drugs, most of which alter gastric acid and its effects on the mucosa of the upper gastrointestinal (UGI) tract. To aid understanding of drug effects, peptic ulcer disease and gastroesophageal reflux disease are described below; related UGI disorders are described in Box 60–1.

PEPTIC ULCER DISEASE

Peptic ulcer disease is characterized by ulcer formation in the esophagus, stomach, or duodenum, areas of the gastro-

intestinal (GI) mucosa that are exposed to gastric acid and pepsin. Gastric and duodenal ulcers are more common than esophageal ulcers.

Peptic ulcers are attributed to an imbalance between cell-destructive and cell-protective effects (ie, increased destructive mechanisms or decreased protective mechanisms). *Cell-destructive* effects include those of gastric acid (hydrochloric acid), pepsin, *Helicobacter pylori* (*H. pylori*) infection, and ingestion of nonsteroidal anti-inflammatory drugs (NSAIDs). Gastric acid, a strong acid that can digest the stomach wall, is secreted by parietal cells in the mucosa of the stomach antrum, near the pylorus. The parietal cells contain receptors for acetylcholine, gastrin, and histamine, substances that stimulate gastric acid production. Acetylcholine is released by vagus nerve endings in response to stimuli, such as thinking